Claims

What is claimed is:

[c1]   An apparatus to unblock a security device issued to an end user, comprising:

an unblocking service for establishing a secure gateway;

a client-side applet for securely transferring information among the unblocking service, the end user, and the security device; and

an agent-side applet for securely transferring information between the unblocking service and a security agent.

[c2]   The apparatus of claim 1, wherein the security agent unblocks the security device from a remote location.

[c3]   The apparatus of claim 1, wherein an end user identifier and a password pair is presented by the end user for the client-side applet to connect to the unblocking service.

[c4]   The apparatus of claim 1, wherein an authentication process is performed for every transfer between the client-side applet and the unblocking service.

[c5]   The apparatus of claim 1, wherein the end user is remote.

[c6]   The apparatus of claim 1, wherein the security device is a smart card.

[c7]   The apparatus of claim 1, wherein the apparatus is accessible via a web interface.

[c8]   The apparatus of claim 3, wherein the end user identifier is an e-mail address.

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[c9] The apparatus of claim 1, further comprising:

an Unblock Authorization Code (UAC) securely transferred from the agent-side applet and the client-side applet to the unblocking service; and

an Unblock Code (UBC) securely transferred from the unblocking service to the client-side applet;

wherein, the client-side applet uses the UBC to unblock the security device.

[c10] The apparatus of claim 9, further comprising:

the client-side applet set to check at a configurable frequency for determining that the UAC is generated.

[c11] The apparatus of claim 9, wherein the UAC is accepted upon correlation of an end user identifier and a security device identifier.

[c12] The apparatus of claim 11, wherein the security device identifier is a serial number.

[c13] The apparatus of claim 11, wherein the end user identifier is an e-mail address.

[c14] The apparatus of claim 9, wherein the UBC is provided by the unblocking service to the client-side applet after correlation of an end user identifier, a password pair, and a security device identifier.

[c15] The apparatus of claim 14, wherein the security device identifier is a serial number.

[c16] The apparatus of claim 14, wherein the end user identifier is an e-mail address.

[c17] An apparatus to unblock a security device issued to an end user, comprising:

an unblocking service for establishing a secure gateway;

a client-side applet for securely transferring information among the unblocking service, the end user, and the security device;

an agent-side applet for securely transferring information between the unblocking service and a security agent;

an Unblock Authorization Code (UAC) securely transferred from the agent-side applet and the client-side applet to the unblocking service;

an Unblock Code (UBC) securely transferred from the unblocking service to the client-side applet; and

the client-side applet set to check at a configurable frequency for determining that the UAC is generated;

wherein, the client-side applet uses the UBC to unblock the security device.

[c18] A method of unblocking a security device issued to an end user by a security agent, comprising:

establishing a secure gateway by an unblocking service;

transferring information among the unblocking service, the end user, and the security device by a client-side applet in a secure manner; and

transferring information between the unblocking service and the security agent by an agent-side applet in a secure manner.

[c19] The method of claim 18, wherein the security agent unblocks the security device from a remote location.

[c20] The method of claim 18, wherein the end user is remote.

[c21] The method of claim 13, wherein the security device is a smart card.

[c22] The method of claim 18, further comprising:

presenting an end user identifier and a password pair by the end user for the client-side applet to connect to the unblocking service.

[c23] The method of claim 18, further comprising:

performing an authentication process for every transfer between the client-side applet and the unblocking service.

[c24] The method of claim 18, further comprising:

transferring an Unblock Authorization Code (UAC) securely from the agent-side applet to the unblocking service;

supplying the UAC to the end user by the security agent;

applying the UAC to the client-side applet by the end user;

transferring the UAC securely from the client-side applet to the unblocking service;

verifying the UAC transferred by the client-side applet and the agent-side applet match through the unblocking service;

transferring an Unblock Code (UBC) securely from the unblocking service to the client-side applet; and

unblocking the security device by the client-side applet using the UBC.

[c25] The method of claim 24, further comprising:

checking at a configurable frequency to determine if the UAC is generated by a client-side applet .

[c26] The method of claim 24, further comprising:

correlating an end user identifier and security device identifier prior to acceptance of the UAC.

[c27] The method of claim 24, further comprising:

providing the UBC by the unblocking service to the client-side applet after correlation of an end user identifier, a password pair, and a security device identifier.

[c28] A method of unblocking a security device issued to an end user by a security agent, comprising:

establishing a secure gateway by an unblocking service;

transferring information among the unblocking service, the end user, and the security device by a client-side applet in a secure manner;

transferring information between the unblocking service and the security agent by an agent-side applet in a secure manner;

presenting an end user identifier and a password pair by the end user for the client-side applet to connect to the unblocking service;

performing an authentication process for every transfer between the client-side applet and the unblocking service;

transferring an Unblock Authorization Code (UAC) securely from the agent-side applet to the unblocking service;

supplying the UAC to the end user by the security agent;

applying the UAC to the client-side applet by the end user;

transferring the UAC securely from the client-side applet to the unblocking service;

verifying the UAC transferred by the client-side applet and the agent-side applet match through the unblocking service;

transferring an Unblock Code (UBC) securely from the unblocking service to the client-side applet;

unblocking the security device by the client-side applet using the UBC;

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checking at a configurable frequency to determine if the UAC is generated by the

client-side applet;

correlating the end user identifier and a security device identifier prior to

acceptance of the UAC; and

providing the UBC by the unblocking service to the client-side applet after

correlation of the end user identifier, the password pair, and the security

device identifier.

[c29] A method of unblocking a security device issued to an end user using a security

agent, comprising:

gathering information from the end user and the security device;

verifying the information gathered from the end user and the security device;

contacting the security agent by the end user;

supplying end user information verbally to the security agent;

verifying identity of the end user by the security agent using an identity

verification mechanism

generating an Unblock Authorization Code (UAC) by an agent-side applet;

delivering the UAC to an unblocking service by the agent-side applet;

storing the UAC against a security device record in a directory service;

supplying the UAC from the security agent to the end user;

applying the UAC to the client-side applet by the end user;

delivering the UAC securely from the client-side applet to the unblocking service;

verifying the UAC of the client-side applet and the agent-side applet match

through the unblocking service;

requesting an Unblock Code (UBC) from the directory service;

unblocking the security device by transferring the UBC from the directory service

to the client-side applet.

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[c30]   The method of claim 29, wherein the security device identifier is a serial number.

[c31]   The method of claim 29, wherein the end user identifier is an e-mail address.

[c32]   The method of claim 29, further comprising:

gathering information from the end user using the client-side applet; and

gathering information from the security device using the client-side applet.

[c33]   The method of claim 29, further comprising:

generating a new UBC by the client-side applet;

setting the security device to the new UBC; and

delivering the new UBC to the directory service.

[c34]   The method of claim 29, further comprising:

verifying the security device is not already permanently blocked.

[c35]   A method of unblocking a security device issued to an end user using a security agent, comprising:

gathering information from the end user and the security device;

verifying the information gathered from the end user and the security device;

contacting the security agent by the end user;

supplying end user information to the security agent;

verifying identity of the end user by the security agent using an identity verification mechanism;

generating an Unblock Authorization Code (UAC) by an agent-side applet;

transferring the UAC to an unblocking service;

storing the UAC against a security device record in a directory service;

transferring the UAC to an unblocking service by the agent-side applet;

storing the UAC against a security device record in a directory service;

supplying the UAC from the security agent to the end user;

applying the UAC to the client-side applet by the end user;

delivering the UAC securely from the client-side applet to the unblocking service;

verifying the UAC transferred by the client-side applet and the agent-side applet match through the unblocking service;

requesting an Unblock Code (UBC) from the directory service;

unblocking the security device by transferring the UBC from the directory service to the client-side applet;

gathering information from the end user using the client-side applet;

gathering information from the security device using the client-side applet;

generating a new UBC by the client-side applet;

setting the security device to the new UBC;

delivering the new UBC to the directory service; and

verifying the security device is not already permanently blocked.

[c36] A computer system adapted to unblock a security device issued to an end user, comprising:

a processor;

a memory, and

software instructions for enabling the computer under control of the processor, to establish a secure gateway by an unblocking service;

transfer information among the unblocking service, the end user, and the security device by a client-side applet in a secure manner;

transfer information between the unblocking service and a security agent by an agent-side applet in a secure manner;

transfer an Unblock Authorization Code (UAC) securely from the agent-side applet and the client-side applet to the unblocking service;

transfer an Unblock Code (UBC) securely from the unblocking service to the client-side applet; and

unblock the security device by the client-side applet using the UBC.

[c37] An apparatus for unblocking a security device issued to an end user using a security device, comprising:

means for establishing a secure gateway by an unblocking service;

means for transferring information among the unblocking service, the end user, and the security device by a client-side applet in a secure manner;

means for transferring information between the unblocking service and a security agent by an agent-side applet in a secure manner;

means for transferring an Unblock Authorization Code (UAC) securely from the agent-side applet and the client-side applet to the unblocking service;

means for transferring an Unblock Code (UBC) securely from the unblocking service to the client-side applet; and

means for unblocking the security device by the client-side applet using the UBC.